

System Requirements and Performance (Dollars are in millions except as noted.)						
California South	90	110	125F	125E	New HSR	Maglev
Physical, production, and traffic factors <i>(traffic data is for the year 2020)</i>						
Route-miles	128	128	128	128	142	123
Trip-time, hours, San Diego-Los Angeles	2.0	1.8	1.8	1.8	1.3	0.7
Average train speed (mph)	63	70	71	73	108	167
Average fare per passenger-mile (dollars)	0.276	0.285	0.285	0.285	0.244	0.312
Trains per day in each direction	25	26	26	27	26	55
Passengers, Millions of Trips (2020)	2.9	3.0	3.0	3.1	3.2	3.6
Passenger-Miles, Millions (2020)	276	283	287	289	365	330
Average trip length (miles)	94	94	94	94	113	92
Average trip length as % of route length	73%	73%	73%	73%	80%	74%
HSGT traffic density per route-mile (millions of passenger-miles per route-mile)	2.1	2.2	2.2	2.3	2.6	2.7
Percent of air traffic diverted	17.8%	19.1%	19.5%	19.8%	21.5%	25.3%
Percent of intercity auto traffic diverted	0.5%	0.6%	0.7%	0.7%	1.1%	1.7%
Percent of HSGT traffic by source:						
Diverted from air	10%	11%	11%	11%	11%	12%
Diverted from auto	4%	5%	5%	5%	7%	11%
Diverted from conventional rail	74%	72%	71%	71%	68%	62%
Diverted from bus	6%	6%	6%	6%	6%	8%
Induced	6%	7%	7%	7%	7%	8%
Operating efficiency factors, 2020						
Train-miles, millions	2.3	2.4	2.4	2.5	2.7	4.9
Passenger-miles per train mile	118	116	118	114	136	67
Seat-miles, millions	618	643	643	668	764	741
Load factor	45%	44%	45%	43%	48%	45%
Gross ton-miles, millions	848	843	794	799	1,054	445
Passenger-miles per gross ton-mile	0.33	0.34	0.36	0.36	0.35	0.74
Train-hours, millions	0.04	0.04	0.03	0.03	0.02	0.03
Passenger-miles per train hour	7,390	8,085	8,391	8,371	14,719	11,132
Operating ratio	60%	59%	58%	63%	66%	60%
Operating results for 2020						
Revenues:						
Passenger transportation revenue	\$76	\$81	\$82	\$83	\$89	\$103
Income from ancillary activities	\$3	\$3	\$3	\$3	\$4	\$5
System revenues	\$79	\$84	\$85	\$86	\$93	\$107
<i>Percent of system revenues from ancillary activities</i>	<i>4%</i>	<i>4%</i>	<i>4%</i>	<i>4%</i>	<i>4%</i>	<i>4%</i>
Operating and maintenance expenses:						
Maintenance of way	\$2	\$2	\$2	\$5	\$9	\$9
Maintenance of equipment	\$6	\$6	\$6	\$6	\$8	\$5
Transportation	\$10	\$10	\$10	\$11	\$11	\$15
Passenger traffic and services	\$15	\$16	\$16	\$16	\$15	\$17
General and administrative	\$13	\$13	\$13	\$13	\$15	\$15
Total O&M expense	\$46	\$47	\$47	\$52	\$59	\$61
<i>Per passenger-mile (dollars):</i>						
Maintenance of way	<i>\$0.009</i>	<i>\$0.008</i>	<i>\$0.009</i>	<i>\$0.019</i>	<i>\$0.025</i>	<i>\$0.028</i>
Maintenance of equipment	<i>\$0.022</i>	<i>\$0.022</i>	<i>\$0.022</i>	<i>\$0.021</i>	<i>\$0.023</i>	<i>\$0.014</i>
Transportation	<i>\$0.035</i>	<i>\$0.036</i>	<i>\$0.034</i>	<i>\$0.040</i>	<i>\$0.029</i>	<i>\$0.046</i>
Passenger traffic and services	<i>\$0.055</i>	<i>\$0.055</i>	<i>\$0.054</i>	<i>\$0.054</i>	<i>\$0.042</i>	<i>\$0.052</i>
General and administrative	<i>\$0.045</i>	<i>\$0.046</i>	<i>\$0.045</i>	<i>\$0.046</i>	<i>\$0.041</i>	<i>\$0.045</i>
Total O&M expense	<i>\$0.166</i>	<i>\$0.168</i>	<i>\$0.165</i>	<i>\$0.179</i>	<i>\$0.160</i>	<i>\$0.186</i>
Operating surplus	\$33	\$37	\$38	\$34	\$35	\$46
<i>Operating surplus per passenger-mile (dollars)</i>	<i>\$0.121</i>	<i>\$0.129</i>	<i>\$0.133</i>	<i>\$0.119</i>	<i>\$0.095</i>	<i>\$0.139</i>
Year showing first operating surplus	Year 2000	Year 2000	Year 2000	Year 2000	Year 2000	Year 2000

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<i>Life-Cycle Measures</i> (All amounts are present values, as of the year 2000, of cash inflows/outflows between 2000 and 2040.)						
Revenues:						
Passenger Transportation Revenues	\$589	\$627	\$635	\$641	\$693	\$812
Income from Ancillary Activities	\$25	\$25	\$27	\$27	\$32	\$35
System Revenues	\$614	\$652	\$662	\$668	\$725	\$848
Less: Total O&M expenses	\$380	\$387	\$386	\$430	\$498	\$531
Operating surplus	\$234	\$265	\$276	\$238	\$227	\$317
Less: Continuing investments	\$28	\$24	\$24	\$24	\$51	\$32
Surplus after continuing investments	\$206	\$241	\$252	\$214	\$176	\$284
Initial investment:						
Initial vehicle investment	\$128	\$141	\$141	\$141	\$209	\$161
Initial infrastructure investment	\$327	\$512	\$549	\$824	\$3,898	\$4,841
Initial investment for ancillary activities	\$4	\$4	\$4	\$4	\$5	\$5
Initial investment, Total	\$459	\$657	\$694	\$969	\$4,112	\$5,006
Percent of total initial investment pertaining to--						
Vehicles	28%	22%	20%	15%	5%	3%
Infrastructure	71%	78%	79%	85%	95%	97%
Ancillary activities	1%	1%	1%	0%	0%	0%
Total initial investment per route-mile	\$3.6	\$5.1	\$5.4	\$7.6	\$29.1	\$40.7
Portion of initial investment that is <u>not</u> covered by surplus after continuing investments	\$253	\$416	\$442	\$755	\$3,936	\$4,722
Percentage of initial investment covered by surplus after continuing investments	45%	37%	36%	22%	4%	6%
Comparison of Benefits and Costs; Assessment of Partnership Potential						
Surplus after continuing investments	\$206	\$241	\$252	\$214	\$176	\$284
Total benefits:						
Benefits to HSGT users:						
System revenues	\$614	\$652	\$662	\$668	\$725	\$848
Users' consumer surplus	\$752	\$807	\$827	\$843	\$976	\$1,249
Total benefits to HSGT users	\$1,366	\$1,459	\$1,488	\$1,511	\$1,701	\$2,096
Benefits to the public at large:						
Airport congestion delay savings						
Operation delays	\$230	\$246	\$251	\$255	\$275	\$322
Passenger delays	\$422	\$451	\$461	\$468	\$505	\$590
Total airport congestion delay savings	\$652	\$697	\$712	\$723	\$780	\$912
Highway delay savings	\$199	\$250	\$271	\$289	\$401	\$643
Emission savings	(\$20)	\$32	\$17	\$83	\$65	\$91
Total benefits to the public at large	\$831	\$979	\$999	\$1,096	\$1,246	\$1,646
Total benefits	\$2,197	\$2,438	\$2,487	\$2,607	\$2,946	\$3,742
Total costs:						
Initial investment	\$459	\$657	\$694	\$969	\$4,112	\$5,006
O&M expense	\$380	\$387	\$386	\$430	\$498	\$531
Continuing investments	\$28	\$24	\$24	\$24	\$51	\$32
Total costs	\$867	\$1,068	\$1,104	\$1,423	\$4,661	\$5,569
Incidence of total costs:						
Costs borne by users	\$614	\$652	\$662	\$668	\$725	\$848
Publicly-borne costs	\$253	\$416	\$442	\$755	\$3,936	\$4,722

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Total benefits less total costs	\$1,329	\$1,370	\$1,384	\$1,184	(\$1,715)	(\$1,827)
Benefits to HSGT users less costs borne by users	\$752	\$807	\$827	\$843	\$976	\$1,249
Benefits to the public at large less publicly-borne costs	\$578	\$563	\$557	\$341	(\$2,691)	(\$3,076)
Ratio of total benefits to total costs	2.53	2.28	2.25	1.83	0.63	0.67
Ratio of benefits to HSGT users, to costs borne by users	2.22	2.24	2.25	2.26	2.35	2.47
Ratio of benefits to the public at large, to publicly-borne costs	3.28	2.35	2.26	1.45	0.32	0.35
Does this case meet the threshold tests for "partnership potential"?	YES	YES	YES	YES	NO	NO